



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/396,248	09/16/1999	SHMUEL PELEG	YIS-002	7168

7590 06/05/2002

RICHARD A JORDAN ESQ  
PO BOX 81363  
WELLESLEY HILLS, MA 024810004

EXAMINER

SENF, BEHROOZ M

ART UNIT	PAPER NUMBER
----------	--------------

2613

DATE MAILED: 06/05/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/396,248

Applicant(s)

PELEG ET AL.

Examiner

Behrooz Senfi

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1 - 27 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 5,963,664) in view of Moezzi et al. (US 5,850,352).

Regarding claim 1, Kumar '664 discloses system for generating a panoramic mosaic image pair (i.e. fig. 1, col. 2, lines 25+), comprising left and right panoramic mosaic image, reads on generating video frames from different viewpoints of the same scene (i.e. col. 2, lines 30+).

Kumar '664 fails to explicitly teach left and right panoramic mosaic images that, when viewed contemporaneously by respective left and right eyes facilitate panoramic stereoscopic viewing of a scene.

However, the above mentioned claim limitation is well-known in the prior art as evidenced by Moezzi '352. In particular, Moezzi '352 teaches respective left and right

Art Unit: 2613

eyes facilitate panoramic stereoscopic viewing of a scene (i.e. col. 39, lines 65+ - col. 40, lines 5).

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Kumar '664 as taught by Moezzi '352, to achieve an alternative technique to form panoramic stereoscopic image.

Regarding claim 2, figure 2 of Kumar '664 shows representation of individual images and change of the respective position, which inherently includes change in angular orientation to generate an image mosaic (i.e. col. 7, lines 38+).

Regarding claims 3 - 6, Kumar '664 discloses translation vector for aligning the images (i.e. abstract), also image generator for generating series of images (i.e. fig. 8, unit 804, and fig. 11, unit 1124, + abstract), and image generator generates series of images using a predetermined computer graphic technique (i.e. fig. 11, col. 1, lines 29+ and col.2, lines 39+), and image generator comprises a camera rig configured to record images of a scene (i.e. fig. 11, unit 1104, col. 16, lines 21+).

Regarding claims 7 and 8, Kumar '664 discloses camera rig records series of images, and left and right panoramic image generates utilize portion of the image generating the left and right panoramic images (i.e. col. 8, lines 2+), and separately recording images (i.e. fig. 2).

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2613

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 9 – 11 and 24 - 25, are rejected under 35 U.S.C. 102(e) as being anticipated by Sasakura et al. (US 2002/0005921).

Regarding claims 9 – 10, and 24 - 25, Sasakura '921 discloses displaying stereo panoramic image to a viewer (i.e. 9a – 9c), comprising left and right display elements each configured to display left and right panoramic images of a scene to viewer (i.e. page 4, sections 0067 – 0069).

Regarding claims 11 and 26, Sasakura '921 discloses display control (i.e. fig. 8, control unit and page 4, section 0071, lines 8+).

6. Claims 12 and 27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasakura '921 and Ritchey (US 5,130,794).

Sasakura '921 discloses displaying stereo panoramic image to a viewer (i.e. 9a – 9c), comprising left and right display elements (i.e. page 4, sections 0067 – 0069).

Sasakura '921 fails to explicitly teach plurality of projectors each configured to project one of left and right panoramic images.

However, the above mentioned claim limitation is well-known in the prior art as evidenced by Ritchey '794. in particular, Ritchey '794 teaches plurality of projectors (i.e. fig. 36, col. 32, lines 56+).

Art Unit: 2613

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Sasakura '921 as taught by Ritchey '794, to achieve panoramic display.

7. Claims 13 – 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 5,963,664) in view of Moezzi et al. (US 5,850,352) further in view of Lipton (US 5,686,975).

Regarding claim 13, combinations of Kumar '664 and Moezzi '352 teaches system for generating a panoramic mosaic image pair (i.e. fig. 1, col. 2, lines 25+ of Kumar '664) and left and right panoramic mosaic image (i.e. col. 2, lines 30+ of Kumar '664) and when viewed contemporaneously by respective left and right eyes facilitate panoramic stereoscopic viewing of a scene (i.e. col. 39, lines 65+ - col. 40, lines 5 of Moezzi '352).

Kumar '664 and Moezzi '352 fail to teach left and right image portions comprises a respective strip of the one of images displaced to the left and right.

However, the above mentioned claim limitation is well-known in the prior art as evidenced by Lipton '975. in particular, Lipton '975 teaches respective strip of the one images displaced to the left and right respectively (i.e. fig. 5b, col. 6, lines 5+ of Lipton '975).

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Kumar '664 and Moezzi '352 as taught by Lipton '975, to achieve an alternative technique for displacement.

Art Unit: 2613

Regarding claims 14 and 15, combinations of Kumar '664 and Moezzi '352 and Lipton '975 teaches system in which the axis is vertical and in which the axis is horizontal (i.e. col. 5, lines 49+ of Lipton '975).

Regarding claims 16, 19, 20 and 23, the limitations claimed are substantially similar to claims 1 and 13, therefore the grounds for rejecting claims 1 and 13, also apply here.

As for strip selector, Lipton '975 teaches stereoscopic display base on strip techniques, which is base on selecting strips and alternating them to construct stereoscopic image display.

Regarding claims 17 – 18 and 21 - 22, the limitations claimed are substantially similar to claims 14 and 15, therefore the grounds for rejecting claims 14 and 15, also apply here.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2613

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

05/29/02



Application/Control Number: 09/396,248

Page 8

Art Unit: 2613



CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600